

CER0154F - Preliminary

L1 + L5 GNSS Diplexer

Features

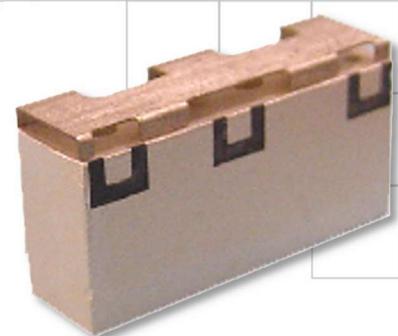
- Low Loss with High Rejection
- Superior power handling and reliability

Applications

- GNSS applications

Description

Surface mount ceramic diplexer for use in specialty application while remaining compatible with USD footprint.



Part Dimensions: 22.0 x 8.15 x 5.0 mm • 3.4 g
Materials: Ag plated ceramic block with fused-tin plated brass shield

Electrical Specifications

Parameter	Frequency (MHz)	Typical at 25°C	Spec. at 25°C	Spec. over -40°C to +85°C
Nominal Impedance	-	50 ohms	-	-
Average Input Power	-	-	-	1.0 Watt max
Peak Input Power	-	-	-	10 Watt max

L1 to Antenna Response

Passband Insertion Loss	1563-1588	1.4 dB	1.6 dB max	1.7 dB max
Passband Ripple	1563-1588	0.3 dB	0.6 dB max	0.7 dB max
Passband Return Loss	1563-1588	15 dB	11 dB min	11 dB min
Attenuation	1166-1187	55 dB	40 dB min	40 dB min
	1516	24 dB	21 dB min	20 dB min
	1635	24 dB	21 dB min	20 dB min

L2 + L5 + E6 to Antenna Response

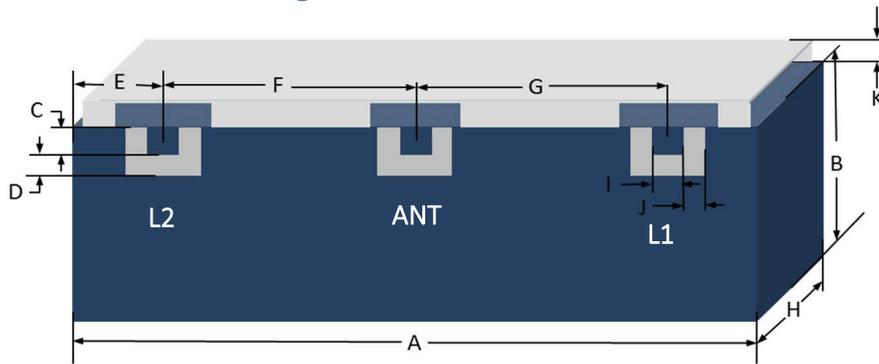
Passband Insertion Loss (10MHz avg)	1166-1187	1.5 dB	1.7 dB max	1.8 dB max
Passband Ripple	1166-1187	0.3 dB	0.6 dB max	0.7 dB max
Passband Return Loss	1166-1187	15 dB	11 dB min	11 dB min
Attenuation	1117	24 dB	21 dB min	20 dB min
	1215	16 dB	13 dB min	13 dB min
	1575	50 dB	45 dB min	45 dB min

Note: CTS tests each unit to the critical specifications above. Subsequent audits may deviate due to repeatability among different test systems which shall not exceed these allowances.

Specification Allowance	
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

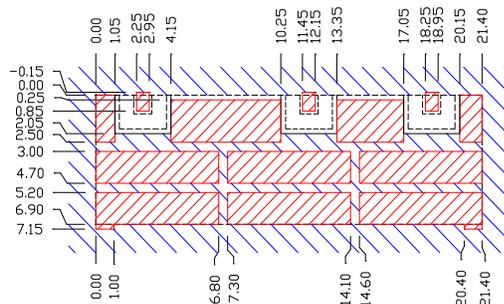
Product has entered initial production. Specifications are based on initial pilot runs and represent expected performance. Reliability testing is currently in progress.

Mechanical Drawing



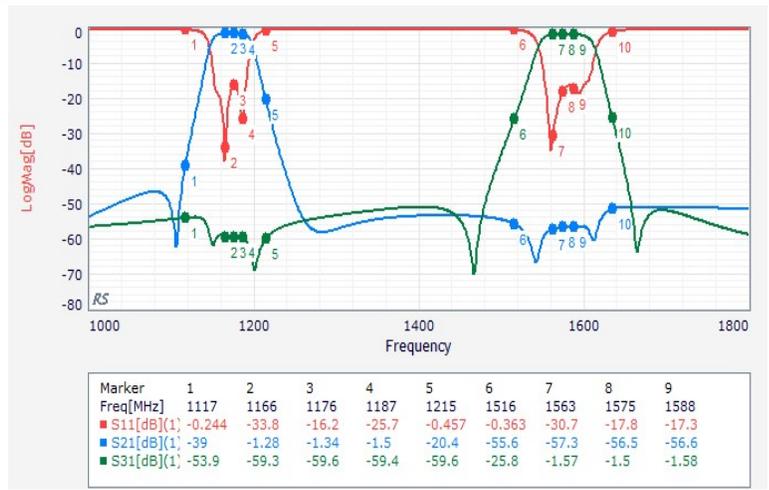
Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	22.00	Max
B	6.90	Max
C	1.00	0.13
D	0.80	0.13
E	N/A	0.13
F	6.80	0.13
G	9.20	0.13
H	5.00	Max
I	1.00	0.13
J	0.80	0.13
K	0.80	0.20

PCB Layout

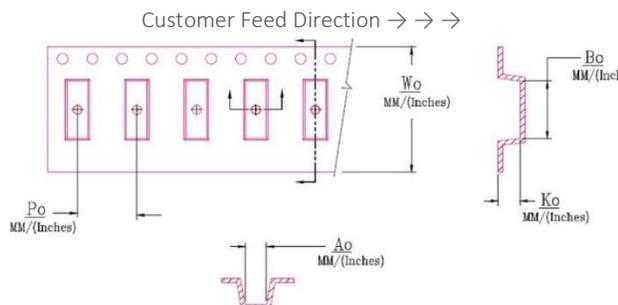


- Filter Outline
- Exposed Conductor
- Solder Resist Over Dielectric
- Solder Resist Over Conductor

Electrical Response



Packaging and Marking



Dimension	Units	Spec.	Product Marking
Reel Diameter	mm	330	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> CTS 154G YWW </div>
Reel Weight	kg	3.8	
Reel Quantity	ea.	250	

W_o	A_o	B_o	K_o	P_o
1.732 in	0.327 in	0.882 in	0.209 in	0.472 in
44.0 mm	8.3 mm	22.4 mm	5.3 mm	12.0 mm

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